

## INTERESTING CORRESPONDENCE.

## THE PEOPLES' COLLEGE.

MESSRS. EDITORS:—The anniversary meeting of the Trustees of the People's College was held at this place yesterday, and was a very pleasant affair. In sending you an account of it I will give a brief history of the institution.

About thirteen or fourteen years ago, the idea of a People's College originated with several members (in western New York) of an organization called "The Mechanics' Mutual Protection"—an order which had most noble objects in view, and which did considerable good in its day, but is now extinct. The names of its originators I need not give in this communication; although several of them have since then arisen to distinguished positions and are now men of mark. After much labor and trouble it was reserved for the Hon. Charles Cook, of Havana, Schuyler county, N. Y., to give the project a fixed and practical impulse, and he may justly be called its founder. It was chartered by the Legislature in 1853, and its objects found a responsive sympathy in his heart, as he had commenced active life as a laboring man, and gradually ascended the ladder of affluence and public reputation, until he has reached a most distinguished and deserved position in society. On September 2, 1858, the foundation-stone of the edifice was laid amid a large concourse of people, and with very imposing ceremonies; and the main building has now reached its fourth story. Mr. Cook is erecting this structure, which will cost \$175,000, and he has also given a farm worth \$30,000 for industrial purposes, which is one of the main objects of the college. This is a good beginning, and affords evidence, that the institution is destined to be one of the best and most comprehensive in our country. Its main objects are to qualify young men for the efficient discharge of the practical duties of life, and to provide the means for elevating the working men to that position in our republic which they deserve to occupy, but which they do not at present. The exercises of the students are to be arranged so as to educate them theoretically and practically for following the callings which they desire to pursue, as mechanics, farmers, &c. Geology, botany, mechanics, chemistry, engineering, agriculture, &c., together with the classics, are to be taught. Workshops are to be erected for teaching practical mechanism, and students who are too poor to pay for their education can labor in connection with the college to defray their expenses.

The anniversary ceremonies, yesterday, were conducted in the open air. A procession of about 3,000 persons was formed in the village, and escorted to the grounds, near the college, by the Cook Guards. On reaching the grounds, the Hon. Charles Cook, in the absence of the Chairman of the Board of Trustees, was called to the chair, and prayer was offered by the Rev. Mr. Hunt, of Ithaca. This was followed by a most eloquent address by the Rev. Asa D. Smith, D. D. of your city. From beginning to end it was listened to with the most profound attention, and every heart seemed to bound with impulses in unison with the ideas of the speaker. His address was full of sympathy for the mechanical and agricultural classes; and he urged, as the foundation of true greatness, in all who were to receive an education here, the study of the scriptures.

The president of the college, Dr. Brown, afterwards stated, in the form of a report, that about fifty men had been kept at work upon the building for the past eleven months, and that \$30,000 had already been expended upon it. He said that he had already received 200 applications from young men in various parts of the country who were waiting to avail themselves of the privileges of the college, and he asked for \$20,000 from Schuyler county to endow a professorship. The audience gave a unanimous response to the effect that this would be done. It is to be hoped that the several chairs in this college will all be endowed soon, and that it will go on prospering and to prosper. No other college in the world is founded on the same principles, nor is there one which has such thoroughly useful objects in view. It has a lofty mission to fulfill; and those who have labored to promote its interests deserve the lasting gratitude of all good men.

The trustees of the college now consist of the Governor and Lieut.-governor of the State, the Speaker of the House of Assembly, the Superintendent of Public

Instruction, and the president of the college, who are, by the charter, made ex-officio members of the Board; also Horace Greeley, New York; Daniel S. Dickinson, Broome; Washington Hunt, Niagara; T. C. Peters, Genesee; D. C. McCallum, New York; A. I. Winthrop, and W. H. Banks, Chemung; C. J. Chatfield, John Magee, and Constant Cook, Steuben; S. Robertson, Tompkins; George J. Pumpelly, David Rees, Tioga; Charles Lee, John Rose, Yates; T. R. Morgan, Broome; E. C. Frost, Charles Cook, W. T. Lawrence, and Joseph Carson, Schuyler; Thurlow Weed, Albany; Asa D. Smith, D. D., New York.

Havana, N. Y., August 11, 1859.

## QUALITIES OF BELTING FOR MACHINERY.

MESSRS. EDITORS:—As the columns of the SCIENTIFIC AMERICAN have furnished much valuable information on the subject of belting, permit me to add my testimony as to the relative durability of different kinds of belts, and thereby, perhaps, save some of your readers from spending their money for that which profiteth nothing.

Having had the management, for several years, of one of the best steam saw and grist-mills in the South, I have had an opportunity to try almost every variety of belting. I am running, with other machinery, a circular saw, of 48 inches diameter, which is cutting upwards of 2,000,000 feet of yellow pine per annum. It is driven from a center-shaft by a 10-inch four-ply belt of vulcanized rubber. The center-shaft is driven by a four-ply belt of the same material, 12 inches wide. The last-named belt was injured by oil, through the carelessness of the engineer; and having heard gutta-percha belting recommended as possessing every good quality of rubber, with the addition of being oil-proof, I substituted gutta-percha in lieu of the 12-inch rubber one; but with very poor success, for it cracked so badly that in less than a month it was a total failure. The injured rubber belt, which had been used constantly for 18 months, was again set to work, and has now run in all 22 months, and is yet good for six months more. The gutta-percha belting, under a light tension and slow motion, might give satisfaction; but it will not do in a situation where its qualities are as severely tested as here—this 12-inch belt requiring a tension-pulley of 400 lbs. weight, and a motion of 2,500 feet per minute, and it has to be shifted to work on fast and loose pulleys. Yet, with ordinary care, a vulcanized rubber belt will last, in this situation, three years, running 12 hours per day.

I will now mention a composition belting manufactured by a company who advertised their goods, and "guaranteed" every belt purchased of them. In April last, I ordered a variety of this belting, such as I was needing, the lot costing about \$120. In place of the 10-inch belt which drives the saw-mandrel before-mentioned, I put in a composition belt, full one-third thicker and heavier than the rubber belt, which had been used for nearly two years. I found it would do as much work with one-half the tension which the rubber belt required, but the material was so rotten that it was with difficulty I could join the ends to last more than two hours. Finally, I succeeded in making a joint which was stronger than any other part of the belt, and then it parted in a new place; so that the belt was entirely used up in two days' running. I wrote to the treasurer of the company, requesting him to order the belt returned, and send me a better article or refund the money; but no notice was taken of my letter. The adhesion of the composition is so imperfect that you can press the edges of an eight-inch belt together, and form a tube through which a cat can pass from one end to the other. And this explains the "pliable" nature of the belting.

I have replaced the old rubber belt again. A leather belt of the best quality will last only about six months in this situation. The canvas in the composition belt is of a poor quality, or else the composition rots the canvas. The company's circular states that "the lacings will not tear away, but will retain their hold on the tightest bands," but this is so far from being the case, that one of their belts has given way repeatedly, and that in a situation very favorable for the durability of the belt. It is eight inches wide and 75 feet long, and runs perpendicularly, requiring hardly any tension except its own weight. A vulcanized rubber belt will do service for more years than this "substitute" will do. The old proverb, "Try what you will, there's nothing

like leather," was penned before vulcanized rubber came in vogue for belting and numberless other purposes; yet for crossed-belts, and those running at high speed over small pulleys, the proverb is still good. But for almost every other situation, I prefer belting of rubber. I have in operation some leather belting manufactured by a New York company, which gives perfect satisfaction. Some other, purchased at the same time and place (all warranted to run straight on the pulleys), bears a strong resemblance in its course to that of a snake in the grass, but perhaps not quite so regular in its curves. It is useless to complain of such treatment, for the parties would make it appear that, although the orders, which are accompanied by a check, almost invariably go safely by mail, yet a letter expressing dissatisfaction, or requesting them to make good their promises, is invariably miscarried.

These remarks are intended entirely for the benefit of mill-owners; for, in many cases, steam mills are so badly mismanaged that the proprietors realize little or no profits from them.

C. W. SHEDD.

Addison, Ala., August 16, 1859.

## TOOL-HOLDERS FOR LATHES.

The following interesting letter, giving a history of the various improvements which have been made in lathe tool-holders, is from a gentleman well qualified to give a succinct and correct account. It was called forth by our description of Peck's improved tool-holder, which appeared in No. 7. of the present volume.

MESSRS. EDITORS:—In my 26 years' experience and observation in the machine and tool business, there have come under my notice many devices for adjusting tools on gib and other lathes; and from the importance of the subject, I have noted somewhat carefully the progress made.

Among the earliest experimenters (to my recollection) was Mr. O. W. Bailey, of Manchester, N. H., who made the first gib lathe ever built in this country. He constructed his tool rest in two pieces; the top part, carrying the tool-post, was attached to the bower or main part by a hinge-joint, and had cast on the bower side a pendant arm hanging down in the hollow part of the lower piece, and was vibrated forward and back by a screw, giving a rocking motion to the upper surface, and producing any required adjustment to the tool.

Mr. James Brown, of Pawtucket, Mass., built and used for six or seven years, and afterwards patented (in 1852, I think) a tool-holder for gib rests, which consisted simply of a thimble with an internal screw, screwed on the top of a round rest, in the center of which was a common tool-post with a long slot and set-screw. To adjust the tool it was simply necessary to slacken the screw in the tool-post, and turn the thimble up or down, as the case required, to the proper height, then to tighten the screw on the tool.

Mr. Rollins, of Nashua, N. H., also built and patented (some six years ago) a tool-holder that is very much like Charles Peck's device; as each of them supports the tool upon convex surfaces resting upon corresponding concaves, which is really the main feature in the two adjustments, and is substantially the same thing in principle.

Mr. C. C. Strong, of Nashua, N. H., built and used some tool-holders that were constructed with a segment of a sphere on the under side of the piece supporting the tool, which segment rested in a corresponding surface, and was held in any required position by tightening the tool, it being adjustable in every direction within proper limits.

The next noteworthy inventor in this line was Mr. C. Van Horn, of Springfield, Mass., who patented, several years ago, a tool-holder that was elevated or depressed by means of a screw and inclined-plane, in substantially the same manner as has been in use some 29 years on a lathe now running in the Newark Machine Co.'s machine-shop, in Newark, N. J., the principal difference between the two being in simply reversing the angle of the plane.

Mr. Lincoln, of the Phoenix Foundry, Hartford, Conn., has also in extensive use an adjustable tool-holder, operated by screw and wedge. Messrs. Gay, Silver & Co., of North Chelmsford, Mass., and Wm. Sellers & Co., and our firm, of this city, have long been using for the same purpose a gib rest very much like the old weighted rest, and adjusted by a thumb screw on the